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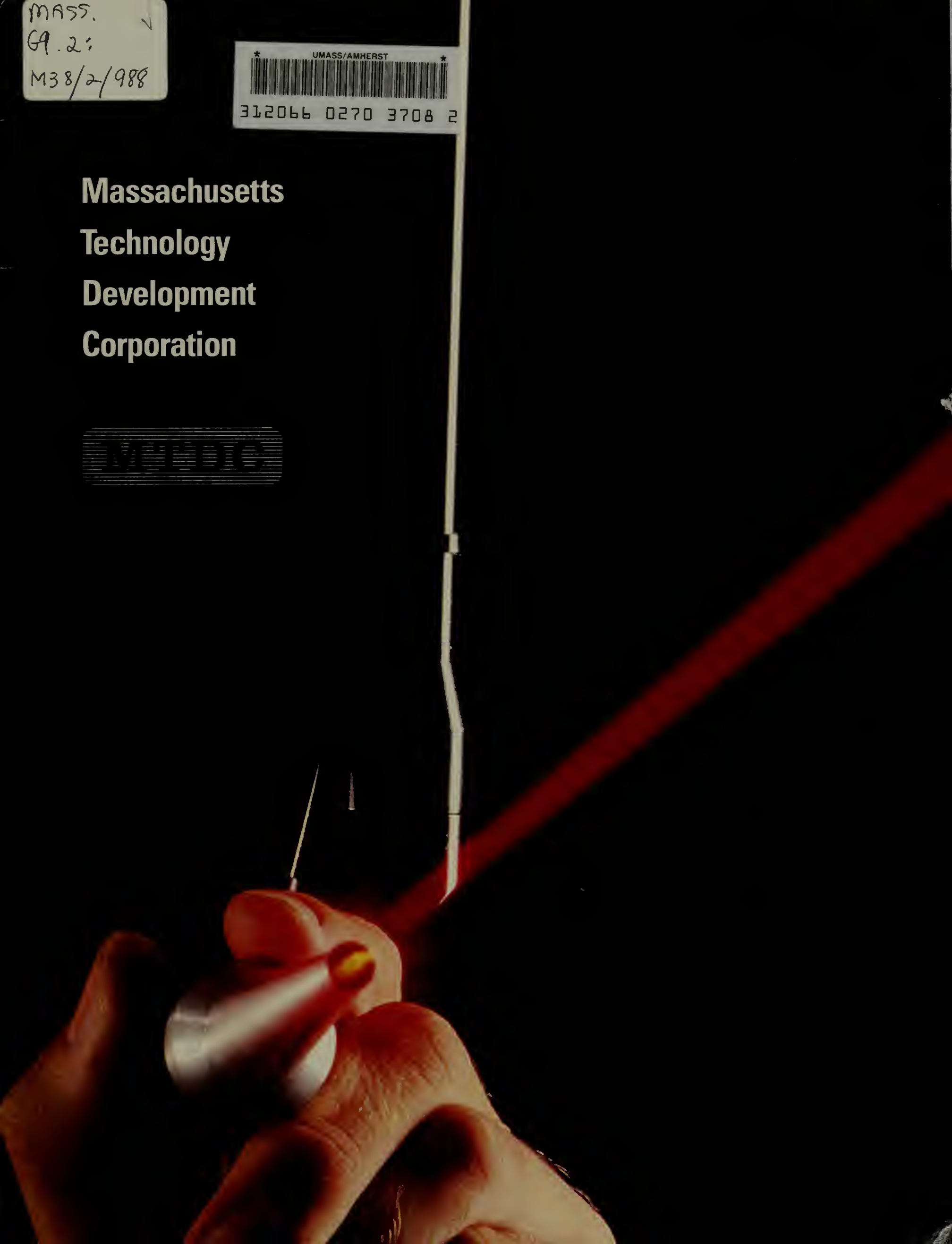
Massachusetts Technology Development Corporation



On the cover:
A close-up view of the hand piece on Laser Engineering's Surgical CO_2 Laser System. An articulated arm connects the hand piece to the laser and main control console. See pages 8 and 9 for a look at the entire system.

GOVERNMENT DOCUMENTS
COLLECTION
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University of Massachusetts
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Massachusetts Technology Development Corporation (MTDC) is an independent state agency which provides a source of capital to new and expanding technology-based companies within the Commonwealth. MTDC finances companies which have the capacity to generate significant employment growth, but which have been unable to secure from private sources sufficient capital on affordable terms to fund such expansion.

Though endowed with few natural resources, Massachusetts has always been in the vanguard of technological invention and innovation by virtue of its talented citizens and renowned educational facilities. To imported raw materials Massachusetts adds invaluable expertise and turns out value-added, state-of-the-art products.

The historical timeline within these pages highlights but a few of the Commonwealth's many notable contributions to the rise of high technology and resultant high standard of living. Also featured are several of MTDC's portfolio companies which epitomize today's high-tech accomplishments.

MTDC Overview

Massachusetts has a long tradition of leadership in the application of technology to solve basic problems, meet human needs, and advance the commercial success of new enterprises. In part, this history has been a result of the Commonwealth's need to provide premium-priced products for export to other parts of the nation and the world to offset the high cost of importing the basic resources of food and energy. The tradition has long been institutionalized through the large number of public and private universities, the strong system of public schools, and the financial institutions that have supported these activities.

The fundamental prerequisites of a strong technology-based economy are technological talent, entrepreneurial leadership and financial resources that encourage research and development and patiently nurture new industries. The government of the Commonwealth has taken a leadership role over the years in providing support for these basic needs.

MTDC History

In 1978 Governor Dukakis and the Legislature enacted a law creating the Massachusetts Technology Development Corporation as one of several economic development initiatives. MTDC was established to address the then existing "capital gap" for expansion of early-stage technology companies.

By the time MTDC commenced operation, the substantial reduction in the federal capital gains tax in 1978 helped to stimulate a significant increase in venture capital funds. As private venture capital flourished in the early 1980s, MTDC focused more of its investment activity on start-up companies where the "capital gap" continued to exist. MTDC established policies and practices to complement, not to compete with, private financial institutions. As a result, MTDC has been able to leverage approximately $5.50 of private co-investment with every $1.00 of its investment in early-stage technology companies based in Massachusetts.

As the climate for venture capital investment in technology companies has changed in the mid 1980s, MTDC has had to respond increasingly to the financing needs of small, existing Massachusetts technology companies that are seeking to expand. In addition, MTDC has made efforts to continue to diversify its investments among industries and geographic areas of the Commonwealth.

MTDC Objectives

Through each of the phases of its existence, MTDC has pursued the following four basic objectives:

- to help create primary employment in technology-based industries in Massachusetts;
- to attract and leverage private investment in Massachusetts companies;
- to foster the application of technological innovations where Massachusetts companies are, or can be, leaders;
- to nurture entrepreneurship among Massachusetts citizens, planting the seeds for long-term economic development in the State.

MTDC Programs

While MTDC's Investment Program has been its most visible activity, the Management Assistance and Financial Packaging Programs have been quietly helping entrepreneurs launch or expand their businesses. Through the Management Assistance Program, MTDC's staff reviews initial business plans and provides counsel as to the most feasible ways of raising necessary capital from private and/or public sources. Through the Financial Packaging Program, MTDC assists companies in finding private investors without making an investment itself. This program helps entrepreneurs with technologically innovative products, but with little proven track record, develop the best methods of presenting their investment opportunity to private investors.

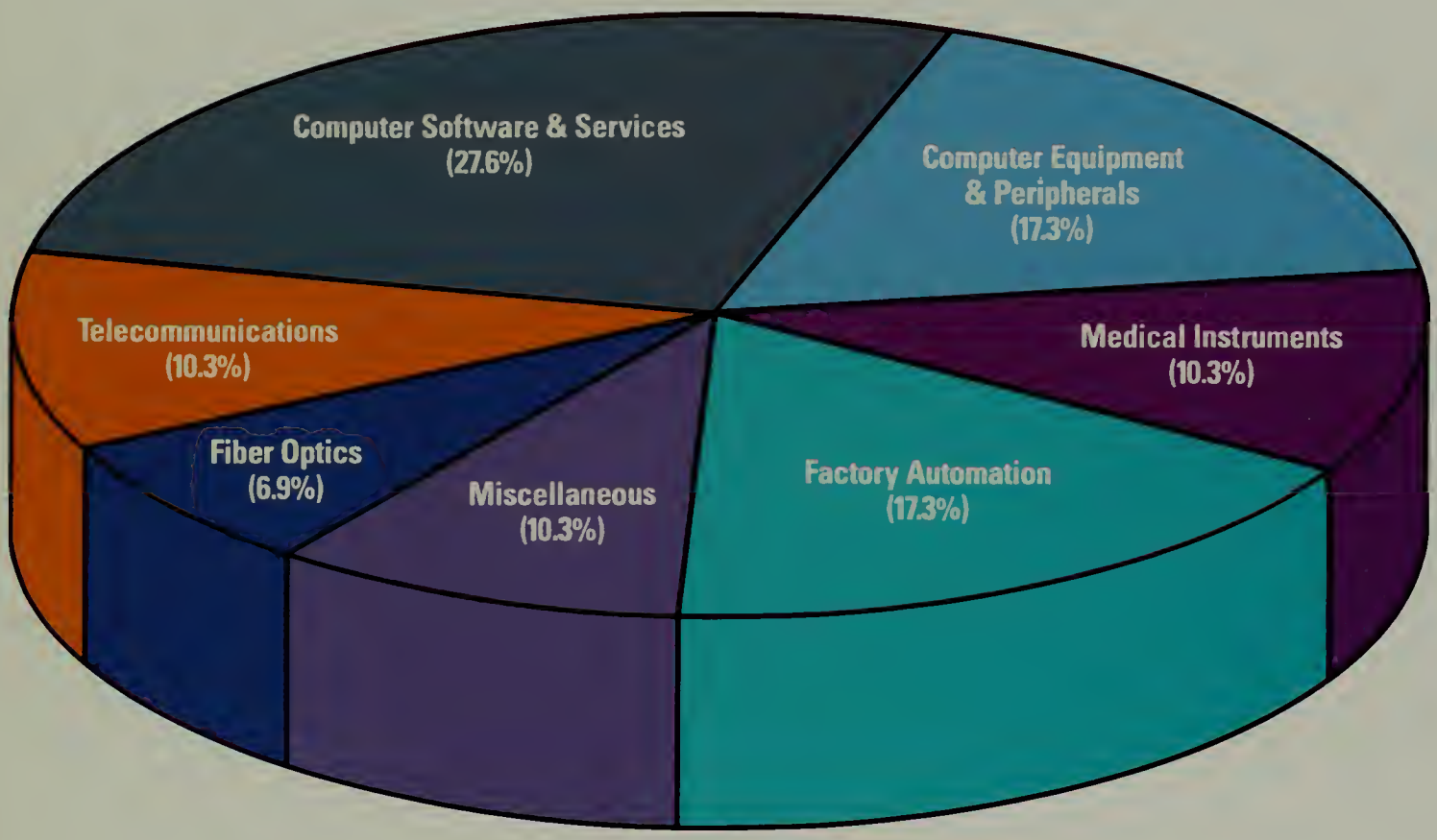
MTDC Procedures

MTDC's staff of Investment Analysts are assigned cases to review and monitor as appropriate under each of its programs. The cases are discussed at regular staff meetings, and those that qualify for investment are closely reviewed by MTDC's management for recommendation to the Board of Directors. Before an investment is approved by the Board, the management of the company will meet with Board members, and a detailed investment report prepared by MTDC staff will be reviewed and analyzed.

No formal application is necessary, but the presentation of a written business plan is required before an in-depth review of a proposal can be undertaken. MTDC makes investments only in companies with the following characteristics:

- The company must be located in, or agree to locate in, Massachusetts.
- The company's business must be technology based, and its principal products or services must be sufficiently innovative to provide a competitive advantage.
- The business expansion which MTDC's investment would help to finance must produce a significant growth in employment.
- The company must be able to demonstrate that it has been unable to secure from conventional sources sufficient capital on affordable terms to finance its expansion.

Industries Represented in MTDC's Portfolio



Computer Software & Services
Access Technology
Aspen Technology
Business Research
Computer Solutions
Interleaf
Publishing Technology
Wakefield Software Systems
Geographic Systems

Telecommunications
Telphi Systems
PracTek Associates
Zoom Telephonics

Medical Instrumentation
AMDEV
Optical Micro Systems
Randwal Instruments

Fiber Optics
Fotec
Chromatic Technologies

Computer Equipment
CGX
Display Components
SKY Computers
Xylogics
Amcard Systems

Factory Automation
Aeonic Systems
Aseco
Icon
Proconics International
Vitronics

Miscellaneous
Crystal Systems
Laser Engineering
Cambridge Analytical

The Entrepreneur

Fiber optic cables take Jan Pirrong from employee to President.

Having spent more than ten years in the wire cable industry, Jan Pirrong was eager to explore the potential and promise of fiber optic cables. His employer, a 75-year-old electric cable company with sales of $50 million, evinced little interest.

Mr. Pirrong's dream of an independent company crystallized during a 1983 visit to the Far East, where he reviewed the facilities of several leading fiber optic cable manufacturers. During that visit, a chance encounter with a friend strengthened his resolve. Just two years earlier, the friend had formed his own fiber optics company, and that company had just completed a successful initial public offering!

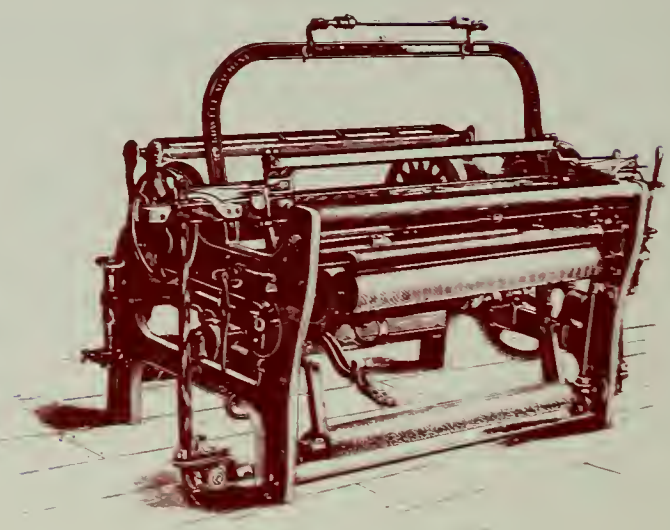
In the next six months, the new venture, Chromatic Technologies, Inc. (CTI), began to take shape. Mr. Pirrong left his employer, worked on a business plan, raised seed capital, and acquired the services of two capable and enthusiastic executives who shared a like business philosophy.

CTI's management team is distinguished by its working knowledge of the materials science technology required to manufacture fiber optic cables and cable assemblies and by its experience in marketing and sales. Jan Pirrong, with master's and undergraduate degrees in electrical engineering from Rensselaer Polytechnic Institute, started as a "technical type" but has moved far beyond mere technical acumen to the role of well-rounded entrepreneur. He currently serves as Chairman of two Working Groups of the Institute of Electrical and Electronics Engineering (IEEE) that influence newly-emerging performance standards for fiber optic cables.

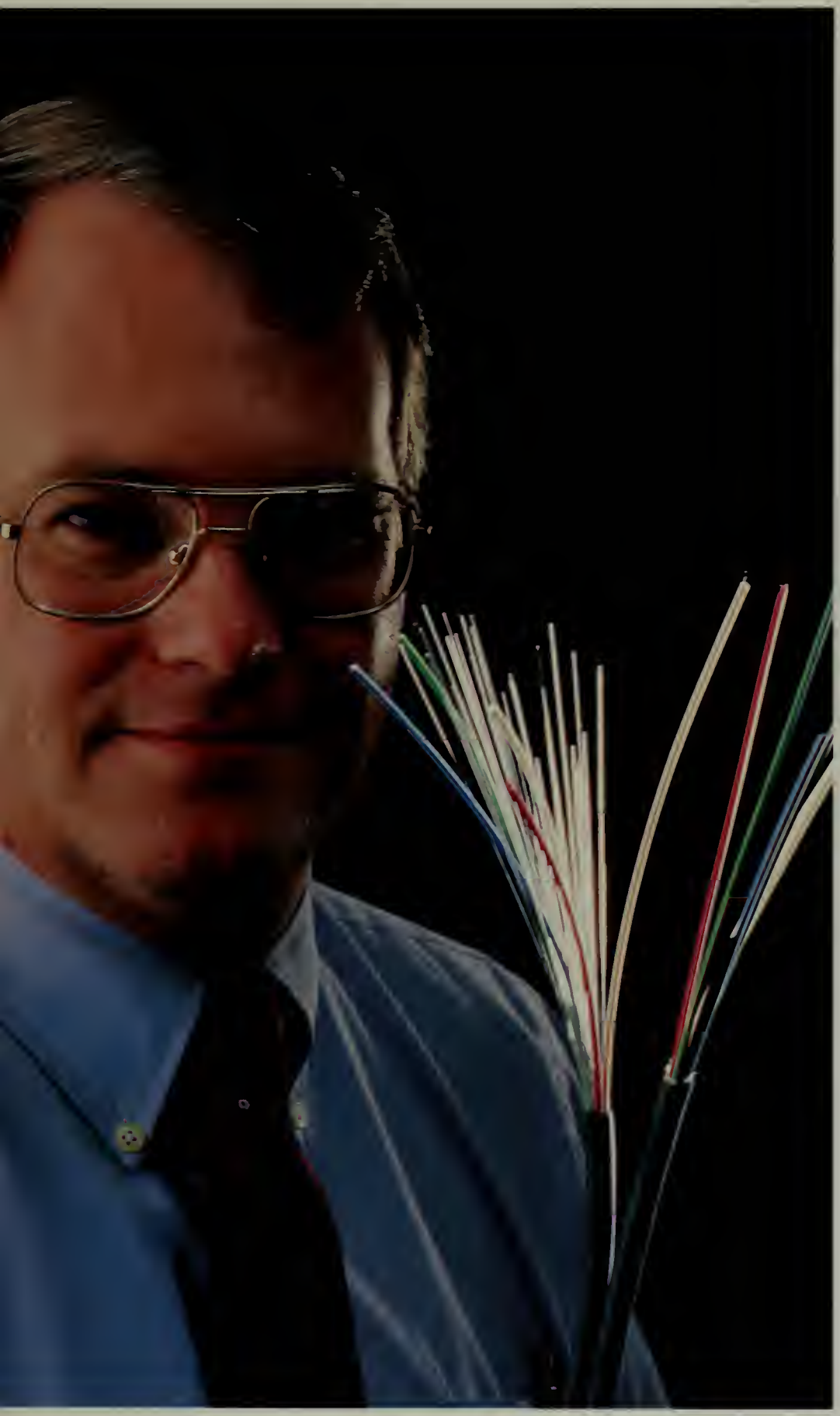
The relatively new fiber optics technology offers a number of advantages over the traditional electrical method of transmitting information. Fiber optic systems can carry more information than electrical systems and are immune to electromagnetic and radio frequency interference. Fiber optic cables are smaller and lighter than electrical cables, thereby reducing installation costs; are extremely difficut to tap into without detection; have lower loss rates than electrical cables and thus can transmit signals of a given strength for longer distances.

In a fiber optic transmission system, the glass fiber along which the message travels is too fragile to be used without some form of protection. The growing use of fiber optics to transmit data and

The whaling industry in Massachusetts expanded rapidly in the 1750s with the installation of "try-works" on sailing vessels. This method of rendering oil from blubber before it spoiled made longer voyages possible, and was a precursor of today's factory ships.



In 1813 Francis Cabot Lowell established the Boston Manufacturing Company, and developed the power loom to convert raw cotton to woven cloth. Shown here is a 36-inch sheeting loom.



the broad range of environmental factors which must be addressed to create a reliable system afford an opportunity to design and manufacture cables for fiber optic systems.

Unsuccessful in its bid for private capital, Chromatic first contacted MTDC in late 1984 concerning a possible debt investment of $250,000. Initial meetings with the Franklin-based firm went well. At the same time, CTI was negotiating a $750,000 equity investment with the William E. Wright Company of West Warren, Massachusetts, a corporate investor with process technology similar to its own.

The joint financing was concluded in June 1985 and is working out well – Wright gives Chromatic a view of a long-established (85 years) operating company; MTDC provides a sounding board for financially-oriented questions and the expertise of an experienced venture capital investor.

The fledgling firm has succeeded in establishing a customer base. Already its premium quality ChromaTek cables are specified by OEMs and by users of voice communication, data communication, and process control systems in a variety of industrial and commercial applications.

Jan Pirrong with a sampling of the fiber optic cables produced by Chromatic Technologies

Charles Goodyear's experiments in Woburn led after many years to the successful vulcanization of rubber. This process combined sulfur, heat and pressure to improve rubber's strength, smell and resiliency. Goodyear received a patent for vulcanized rubber in 1844.

Boston inventor Elias Howe patented this lock-stitch sewing machine in 1846. Its basic principles were improved upon by another Boston inventor, Isaac Singer, who began producing machines in 1850.

Major Markets – Innovations in Manufacturing

CGX Corporation creates new tools for industrial modernization.

Smokestack America, the primary manufacturing base of United States industry, has been hard hit by the onslaught of foreign competition. Major manufacturers recognize that to be competitive in today's marketplace, they must update and modernize their facilities and technologies. Computer-aided design and manufacturing (CAD/CAM) are integral parts of the rebuilding process underway in many industries today.

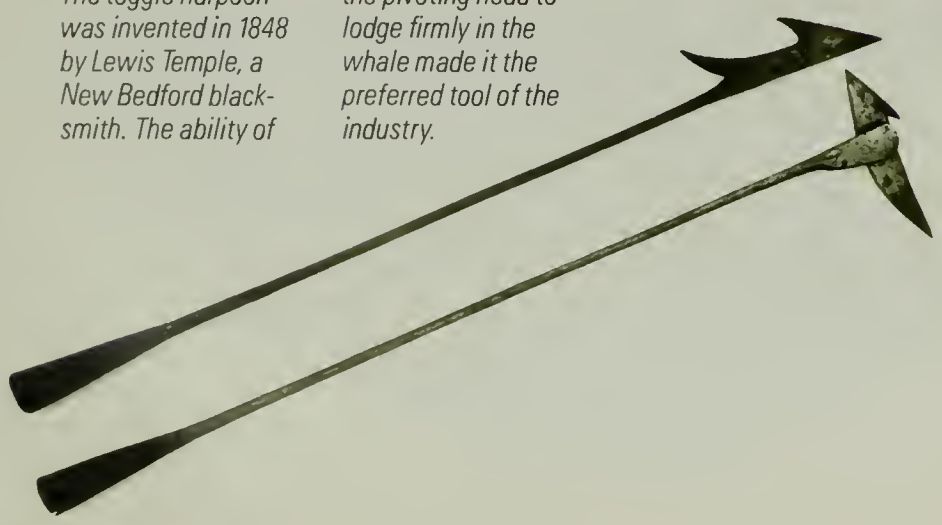
CGX Corporation of Acton was founded in 1981 by brothers Kenneth and John Leavitt in response to the need for more capable CAD/CAM workstations designed for connection to IBM mainframe computers. Workstations are the user's window to the world of CAD/CAM – providing the physical tools to transform concepts and ideas into designs for products ranging from automobiles to printed circuit boards. Prior to CGX's entry into the market, all CAD/CAM workstations in the IBM environment utilized time-shared display controllers connected by a series of bulky cable networks.

With the introduction of its System 2001 in 1983, CGX brought to the marketplace workstations which provide both color-raster and monochrome-vector displays on a single coaxial cable which can be up to two miles long. Pioneered by CGX and subsequently adopted by most of the industry, one-on-one architecture is a feature of System 2001. In this configuration, each workstation has an individual display controller self-contained in the workstation. This design concentrates processing power locally, creating a faster, more responsive workstation and greatly increasing the performance and productivity of draftsmen, designers and engineers.

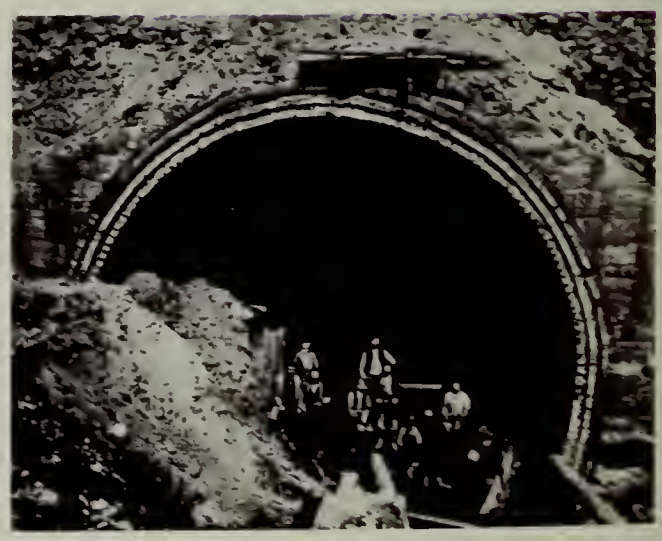
Recognizing the increased sophistication of CAD/CAM users, in August of 1985 CGX introduced a new series of high-performance workstations offering increased local intelligence and local 3-D capabilities. The aerospace, automotive and electronics industries are primary users, employing the displays for mechanical design, numerical control, printed circuit board design, simulation and solids modeling, architectural engineering and construction, and other applications.

CGX recently signed its first distribution agreement giving exclusive rights to market the company's System 2001 products in Japan to Sumisho Electronics Co. Ltd. Sumisho Electronics is a subsidiary of Sumitomo Corporation, one of Japan's largest industrial organizations.

Since MTDC's $250,000 debt/equity investment in August 1982, the company has raised a total of $12.9 million in three rounds of financing from private venture capital investors.

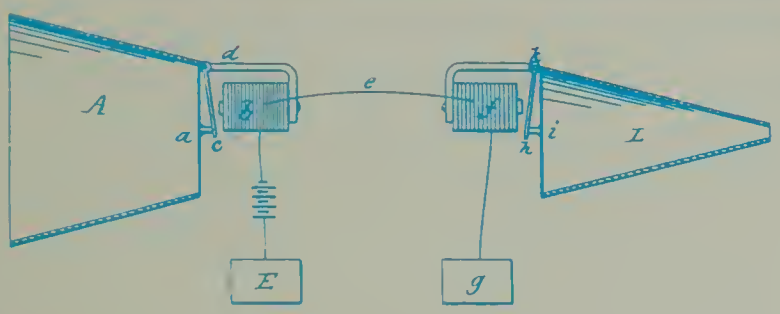


The toggle harpoon was invented in 1848 by Lewis Temple, a New Bedford blacksmith. The ability of the pivoting head to lodge firmly in the whale made it the preferred tool of the industry.



Workers take a break at the entrance to the Hoosac Tunnel in North Adams. The 4¾ mile tunnel through the Berkshires was completed in 1875, after twenty-four years of construction. The project aided development of the compressed-air drill, and was a testing ground for Alfred Nobel's latest invention, nitroglycerin.

CGX Corporation's System 2001 provides high performance, 5080 compatible, 3-D graphics workstations with unique local intelligence features and flexible networking capabilities.



Witnesses
Ewell & Dick
H. J. Hutchinson

Inventor:
A. Graham Bell
by Atty Pollock & Bailey

This diagram accompanied Alexander Graham Bell's 1876 patent for the telephone. It describes the method by which sound causes vibration and electrical undulation, creating a similar sound at a receiver. The first telephone line was established on April 4, 1877, linking Boston and Cambridge.

Laser Engineering's sealed-off carbon dioxide lasers are small enough to fit within a portable console, yet powerful enough to perform a wide range of surgical tasks. Here the Surgical CO_2 Laser System's aiming beam is tested for accuracy.

Export

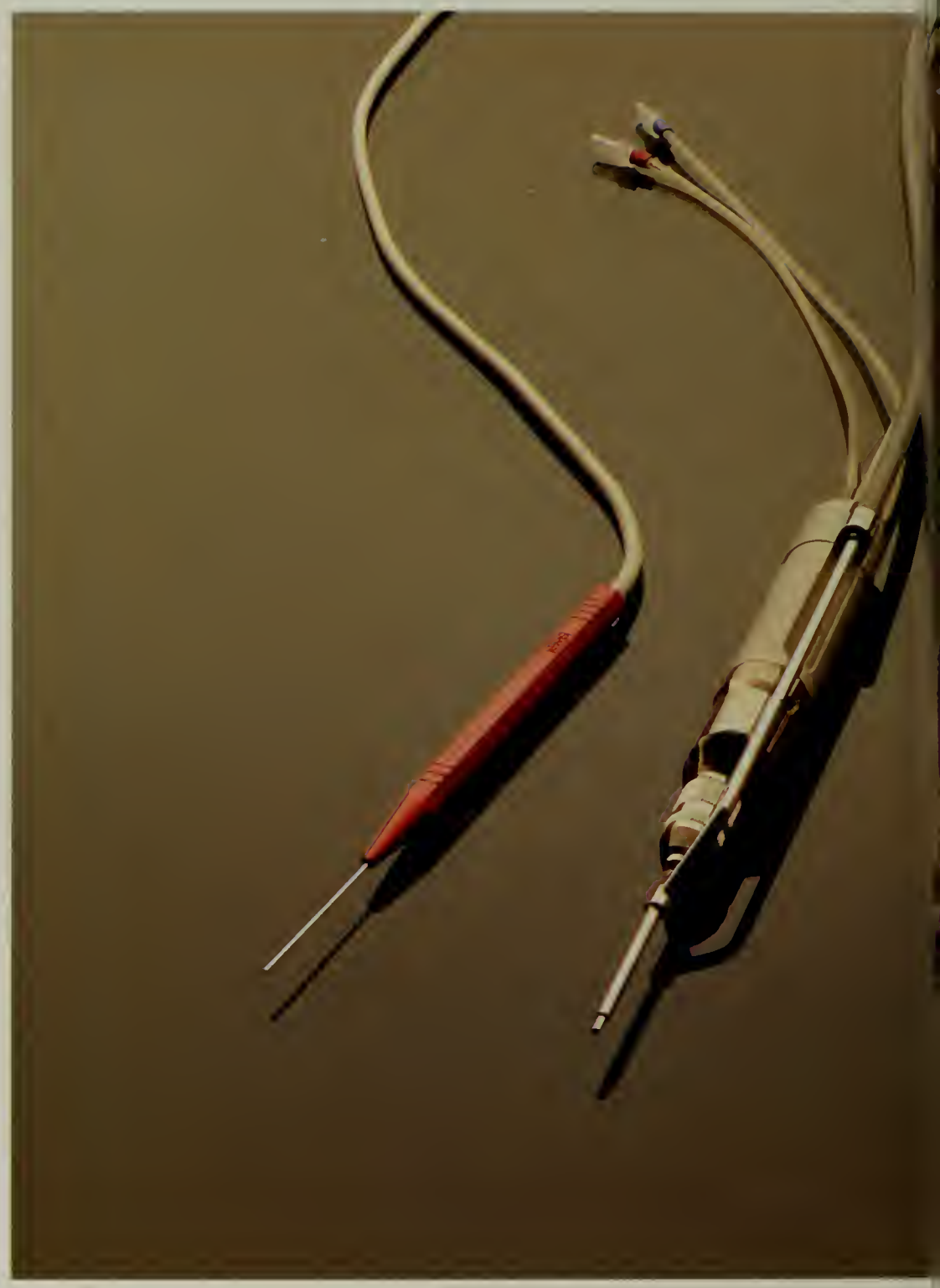
Optical Micro Systems establishes an international network for product distribution.

Massachusetts has always been a value-added manufacturing state: it imports raw materials, adds a certain amount of "smartness" or technology, and exports the finished products. So too does Optical Micro Systems, Inc. (OMS) of Danvers.

The 1981 start-up firm designs and manufactures automated microsurgical instruments and related accessories, primarily to address the specific requirements of ophthalmic surgeons. These instruments reduce surgical time and trauma, allow the effective treatment of conditions previously not surgically treatable, and reduce cost to both patient and physician.

The company's seven products are designed as modules, such that they can be purchased separately or joined together in various configurations. Since its first shipment in April 1982, the firm has sold more than 300 of these modules for use in nearly as many hospitals and clinics.

Assisted by $200,000 of debt and equity funds from MTDC in late 1983, OMS began examining possible alternative applications for its systems, and currently has under development multiple new products, including several for use in neurosurgery and orthopedic surgery.



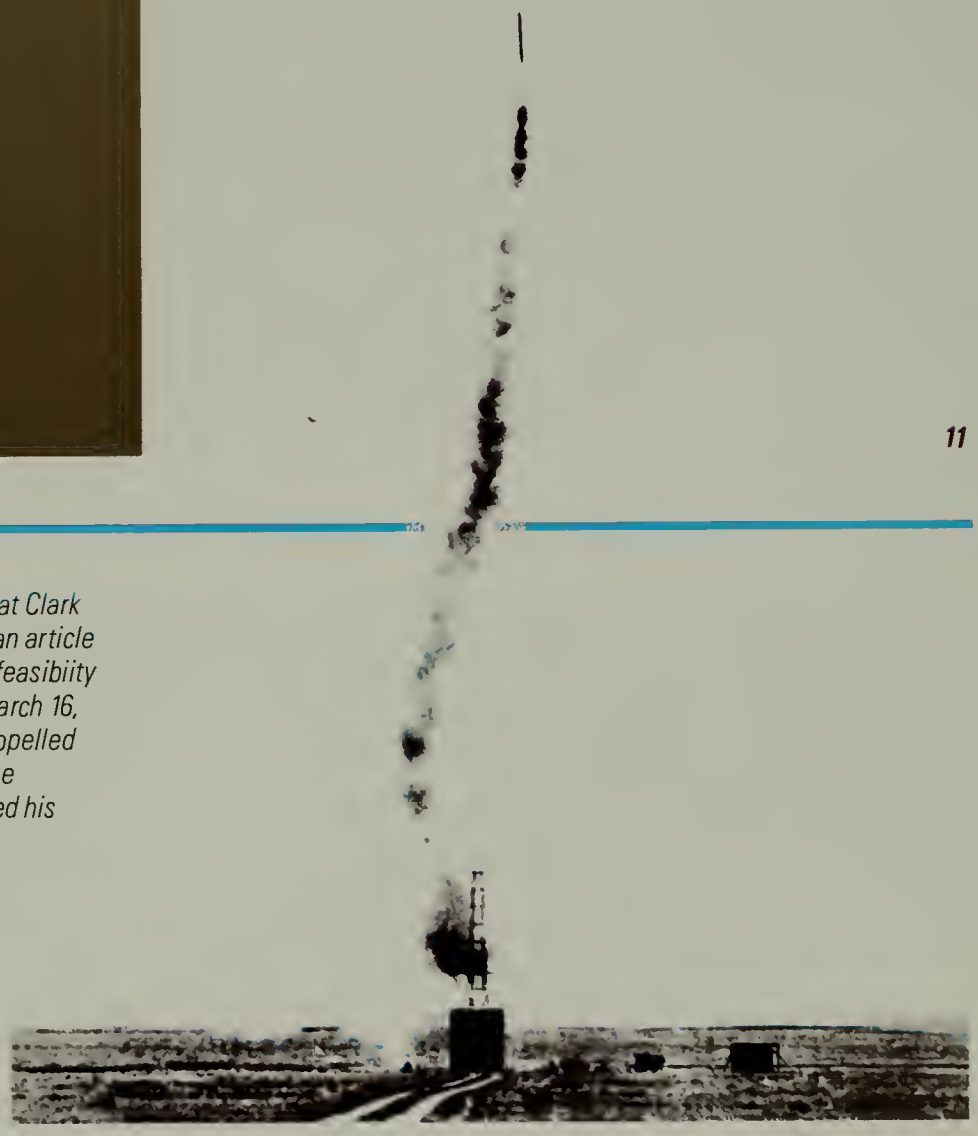
Microsurgical instruments designed and manufactured by Optical Micro Systems reduce surgical time and trauma.

F.E. and F.O. Stanley take a spin through Boston's suburbs in 1897. Their steam powered automobile was acknowledged as faster and more dependable than any rival, and in 1899 they produced two hundred "steamers" at the Stanley Motor Carriage Company in Newton.

OMS has also successfully established a network of medical product distributors throughout the free world. With twenty-nine active international representatives, the corporation now makes half its sales outside the United States and exports to six continents.

Because of the worldwide demand for technology-based products, Massachusetts has seen its role in the international exporting arena increase significantly. The Bay State is fortunate to have as its "window" on foreign trade the full resources of the Massachusetts Port Authority, but more specifically, the Massport Foreign Trade Unit, which works with the State's smaller companies, helping them to identify and develop new foreign markets for their products.

In 1919 Robert Goddard, a physicist at Clark University in Worcester, published an article which described the mathematical feasibiity of firing a rocket to the moon. On March 16, 1926, he achieved the first liquid-propelled rocket flight on a farm in Auburn. The neighbors complained, and he moved his experiments to a nearby military reservation.

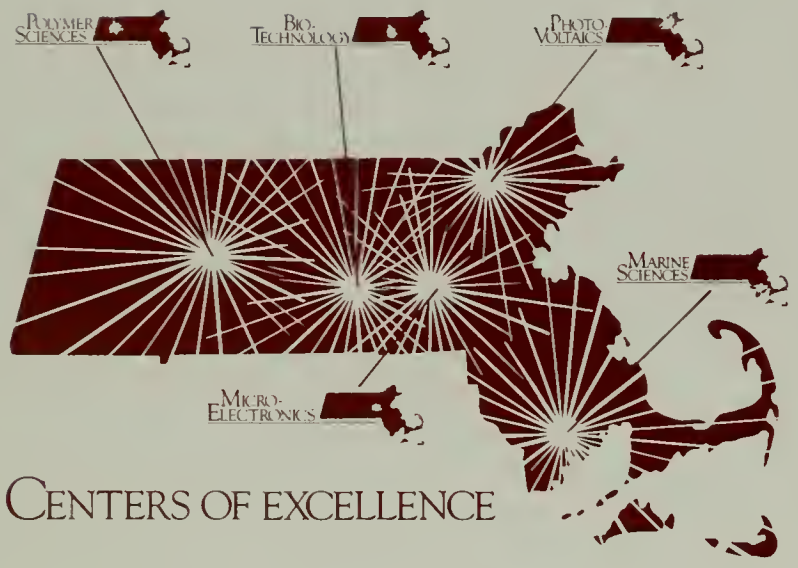


The Academic Environment

An abundance of educational institutions gives the Commonwealth a competitive edge.

In 1635 Boston Public Latin School was established as the first public secondary institution in the Colonies. To this day it remains one of the foremost secondary schools in the nation, its notable graduates legion.

More importantly, Boston Latin has helped to establish in Massachusetts a tradition of quality public education that has become the foundation for much of the economic benefit accruing to the Commonwealth.

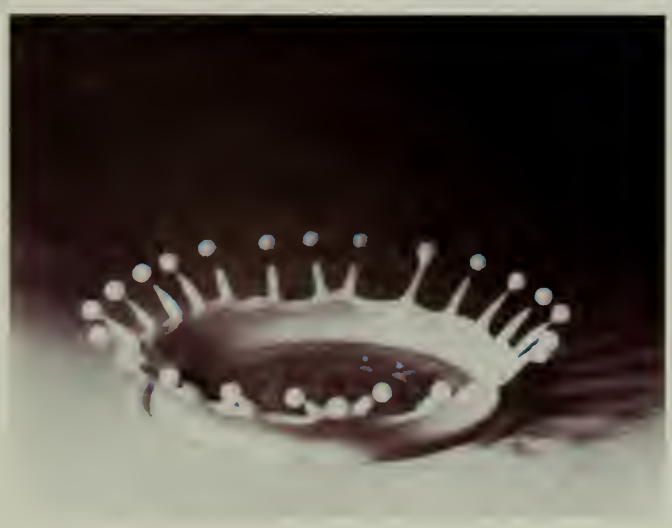


From the shores of the Woods Hole Oceanographic Institution overlooking Buzzards Bay to the picturesque campus of Williams College in the Berkshires, Massachusetts is blessed with an abundance of public and private schools serving the needs, not only of the State's citizens, but also those of others beyond its geographic boundaries.

Basic and applied research have long been areas of expertise among Massachusetts colleges. The benefits of that academic research were the initial building blocks of many successful Massachusetts companies. In order to stay on the cutting edge of technological developments that will keep the Commonwealth competitive in the future, Governor Dukakis has instituted the Centers of Excellence Program.

These five centers concentrate public and private resources to undertake research, development and commercialization of products in the areas of polymers, biotechnology, microelectronics, marine sciences and photovoltaics.

Together with the existing strong base of public and private universities, a strong venture capital community and financing initiatives like MTDC, Massachusetts will continue to nurture technology-based businesses at the forefront of innovation.



This famous photograph of the splash of a milk drop was published by M.I.T. professor Dr. Harold Edgerton in 1938 to dramatize the potential of electronic strobe flash photography. His experiments include aerial reconnaissance photography, seismic profiles of the ocean floor, and high-speed photography of the detonation of an atom bomb.

The Polaroid Corporation of Cambridge has made many contributions to science and technology. In this test a polarizing filter is used to view the effects of stress on plastic.

Research vessels surround the pier at Woods Hole Oceanographic Institution, with the waters of Vineyard Sound in the distance.

Engineering professor Howard Aiken poses alongside the IBM Automatic Sequence Controlled Calculator. This prototype of modern programmed computers was built at Harvard University during World War II in response to the U.S. Navy's demand for rapid mathematical calculations.

Whirlwind I, the first large-scale digital computer, was built at M.I.T. in the early 1950s. At far left is project director Jay Forrester, who developed magnetic core memory. Magnetic core was the primary memory system used in most computers through the mid 1970s.

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Abt Associates, Inc.

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International Data Group, Inc.

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Obermayer Associates

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Digital Equipment Corporation

Dr. Alden S. Raine
Director, Governor's Office of Economic Development

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Cullinet Software, Inc.

Professor David N. Wormley
Head, Department of Mechanical Engineering
Massachusetts Institute of Technology

Left to right:
Rudman, Payne, Iandiorio, Hodgman, Ehrenfeld, Swersky, Wormley, McNeill, Smith, Baerlein**, Obermayer, Crowley, Kincannon****

**Representing Sec. Keefe*
***Representing Sec. Murphy*
****Representing Dr. Raine*

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Deborah A. Todd
Secretary

How to Apply

What the Applicant Does:

Applicant submits a comprehensive written business plan, which is the only required form of application. A well-thought-through plan reduces the need for questions and speeds the investment process, which oftentimes can be completed in eight weeks. The plan should address the following areas:

- characteristics and proprietary position of the company's products or services;
- present and future markets for those products or services;
- strategy for achieving and maintaining significant market share;
- company's financial history (if applicable) and projections, including balance sheets, profit and loss statements and cash flows;
- backgrounds, experience and financial commitments of principals and key managers;
- statement of the amount, timing and projected use of the capital required;
- statement of the projected growth in employment, or other positive economic impacts, which an MTDC investment would facilitate.

What MTDC Does:

MTDC's professional staff negotiates with each company an investment whose terms are specifically tailored to meet the needs of the company, the interests of the co-investor and the goals of MTDC. Applications are invited not only from entrepreneurs who are principals in their own firms but also from members of the venture capital, banking, legal, auditing and academic professions who are familiar with business opportunities.

MTDC seeks to make all of its investments on a co-venture basis with compatible professional investors from the private sector. These may include venture capital firms, banks, SBICs, insurance companies, limited partnerships, informal investor networks, and individual and corporate investors with substantial net worths.

The size of MTDC's initial funding to an applicant is determined by the capital needs of the firm and the investment of the co-investor. Though investments can range up to a maximum of $500,000, most are typically in the $100,000 to $250,000 range.

Investments are made as debt, equity or a combination of both. The debt portion of the financing is usually a long-term, unsecured, subordinated note at a favorable interest rate with a partial moratorium on principal repayment. As a condition of providing such favorable debt financing, MTDC seeks an equity participation which is fair and reasonable when compared to the investment being made by the co-investor. Typical equity participation is through the purchase of common stock.

While the terms of each investment differ according to the needs of the particular situation, the process by which MTDC's decision is reached remains constant:

- initial review by the professional staff;
- in-depth analysis by the professional staff;
- review by the Investment Committee of the Board of Directors;
- consideration and vote by the full Board of Directors.

The Board of Directors makes the final decision on whether to commit funds. In situations where MTDC makes an in-depth review of a proposal and concludes not to make an investment, an effort will be made to direct the company to other potential sources of funds.

Proposals for financing should be addressed directly to the President, John F. Hodgman, at MTDC's Boston office.

The MTDC Portfolio

6/30/88

Company	Location	Industry	MTDC Investment	Initial Investment Date
ACCESS TECHNOLOGY, INC.	Natick	Business Software	$250,000	11/83
AEONIC SYSTEMS, INC.	Billerica	Process Control	450,000†	1/84
AMCARD SYSTEMS, INC.	Hudson	Card Reader/Photo Identification	200,000	1/84
AMDEV, INC.	Danvers	Medical Instruments	250,000	12/83
AMHERST ELECTRONIC INSTRUMENTS, INC.	Haydenville	Automation: Broadcasting	282,000*✓	2/87
ASECO CORPORATION	Marlboro	Automation: Semiconductor	400,000†	3/84
ASPEN TECHNOLOGY, INC.	Cambridge	Chemical Process Simulation	150,000	12/81
CAMBRIDGE ANALYTICAL ASSOCIATES, INC.	Boston	Hazardous & Toxic Waste Analysis	200,000	3/85
CHROMATIC TECHNOLOGIES, INC.	Franklin	Specialty Fiber Optic Cabling	250,000	6/85
COLLEGE COUNSEL	Natick	Computerized Educational Information Services	250,000	5/88
COMPUTER SOLUTIONS, INC.	Burlington	Manufacturing Software	300,000*	7/83
CRAMER INTERACTIVE SYSTEMS GROUP	Braintree	Interactive Video Display Systems	272,000*	6/87
CRYSTAL SYSTEMS, INC.	Salem	Materials Science	250,000	10/81
DATA INNOVATIONS, INC.	Wilmington	CAD Hardcopy Device	250,000	1/88
DISPLAY COMPONENTS, INC.	Westford	Video Display Deflector Yokes	295,000*	1/80
FOTEC, INC.	Boston	Fiber Optic Test Equipment	325,000*	6/83
HARBOR MEDICAL DEVICES, INC.	Boston	Medical Instruments	250,000	6/87
ICON CORPORATION	Cambridge	Automation: Factory	389,000*	12/80
IMC SYSTEMS GROUP, INC.	Concord	Import Management Software	125,000	9/87
INTERLEAF, INC.	Cambridge	Publishing Software	200,000	8/82
KRONOS INCORPORATED	Waltham	Computerized Timekeeping Systems	200,000†	4/87
LASER ENGINEERING, INC.	Milford	Laser Technology	225,000*	3/83
MICROTOUCH SYSTEMS, INC.	Woburn	Touch Screen Products	250,000	9/86
MILLITECH CORPORATION	So. Deerfield	Millimeter and Submillimeter Components	250,000	6/88
MULTILINK, INC.	Lynn	Teleconferencing Systems	450,000*	9/87
OPTICAL MICRO SYSTEMS, INC.	Danvers	Ophthalmic Instruments	236,800*	11/83
PRACTEK ASSOCIATES, INC.	Chicopee	Educational Communications	225,000*	7/83
PROCONICS INTERNATIONAL, INC.	Woburn	Automation: Semiconductor	150,000	7/82
PUBLISHING TECHNOLOGY CORP.	Newton	List Management Software	25,000	5/82
SKY COMPUTERS, INC.	Lowell	Array Processors	250,000	8/82
SPECTROVISION, INC.	Chelmsford	HPLC Analytical Instruments	250,000*	9/87
TACTICS, INC.	Andover	Mapping Software	280,000*	2/85
TYTRONICS, INC.	Waltham	Industrial Analytical Measurement Instruments	225,000	6/87
VITRONICS CORPORATION	Newburyport/ Newmarket, NH	Infra-red Technology	100,000	5/83
VOICETEK CORPORATION	Newton	Voice Storage/Retrieval Computers	200,000†	12/87
XRL, INC.	Norwell	Automation: Semiconductor	456,666*	1/87
ZOOM TELEPHONICS, INC.	Boston	Telecommunications	275,000*	8/85

*Includes subsequent rounds of investment.

†Includes PRIT Funds

The MTDC Portfolio

1/31/88

Company	Location	Industry	MTDC Investment	Initial Investment Date
ACCESS TECHNOLOGY, INC.	Natick	Business Software	$250,000	11/83
AEONIC SYSTEMS, INC.	Billerica	Process Control	450,000†	1/84
AMCARD SYSTEMS, INC.	Hudson	Card Reader/Photo Identification	200,000	1/84
AMDEV, INC.	Danvers	Medical Instruments	250,000	12/83
AMHERST ELECTRONIC INSTRUMENTS, INC.	Haydenville	Automation: Broadcasting	230,000*	2/87
ASECO CORPORATION	Marlboro	Automation: Semiconductor	400,000†	3/84
ASPEN TECHNOLOGY, INC.	Cambridge	Chemical Process Simulation	150,000	12/81
CAMBRIDGE ANALYTICAL ASSOCIATES, INC.	Boston	Hazardous & Toxic Waste Analysis	200,000	3/85
CHROMATIC TECHNOLOGIES, INC.	Franklin	Specialty Fiber Optic Cabling	250,000	6/85
COMPUTER SOLUTIONS, INC.	Burlington	Manufacturing Software	300,000*	7/83
CRAMER INTERACTIVE SYSTEMS GROUP	Braintree	Interactive Video Display Systems	250,000	6/87
CRYSTAL SYSTEMS, INC.	Salem	Materials Science	250,000	10/81
DATA INNOVATIONS, INC.	Wilmington	CAD Hardcopy Device	250,000	1/88
DISPLAY COMPONENTS, INC.	Westford	Video Display Deflector Yokes	295,000*	1/80
FOTEC, INC.	Boston	Fiber Optic Test Equipment	325,000*	6/83
HARBOR MEDICAL DEVICES, INC.	Boston	Medical Instruments	250,000	6/87
ICON CORPORATION	Cambridge	Automation: Factory	389,000*	12/80
IMC SYSTEMS GROUP, INC.	Concord	Import Management Software	250,000	9/87
INTERLEAF, INC.	Cambridge	Publishing Software	200,000	8/82
KRONOS INCORPORATED	Waltham	Computerized Timekeeping Systems	200,000†	4/87
LASER ENGINEERING, INC.	Milford	Laser Technology	125,000	3/83
MICROTOUCH SYSTEMS, INC.	Woburn	Touch Screen Products	250,000	9/86
MULTILINK, INC.	Lynn	Teleconferencing Systems	250,000	9/87
OPTICAL MICRO SYSTEMS, INC.	Danvers	Ophthalmic Instruments	236,000*	11/83
PRACTEK ASSOCIATES, INC.	Chicopee	Educational Communications	225,000*	7/83
PROCONICS INTERNATIONAL, INC.	Woburn	Automation: Semiconductor	150,000	7/82
PUBLISHING TECHNOLOGY CORP.	Newton	List Management Software	25,000	5/82
SKY COMPUTERS, INC.	Lowell	Array Processors	250,000	8/82
SPECTROVISION, INC.	Chelmsford	HPLC Analytical Instruments	150,000	9/87
TACTICS, INC.	Andover	Mapping Software	280,000*	2/85
TYTRONICS, INC.	Waltham	Industrial Analytical Measurement Instruments	225,000	6/87
VITRONICS CORPORATION	Newburyport/ Newmarket, NH	Infra-red Technology	100,000	5/83
VOICETEK CORPORATION	Newton	Voice Storage/Retrieval Computers	200,000†	12/87
XRL, INC.	Norwell	Automation: Semiconductor	416,666*	1/87
ZOOM TELEPHONICS, INC.	Boston	Telecommunications	200,000	8/85

*Includes subsequent rounds of investment.

†Includes PRIT Funds

Acknowledgments

Historical timeline:

tryworks The Whaling Museum, New Bedford, MA; **power loom** Museum of American Textile History; **Goodyear** The Bettmann Archive; **sewing machine** Smithsonian Institution photograph #45,525B; **harpoon** The Whaling Museum, New Bedford, MA; **Hoosac Tunnel** SPNEA, Boston; **Bell diagram** Smithsonian Institution photograph #20,944; **Bell** Boston Public Library, Print Department; **Stanley twins** The Bettmann Archive; **Goddard** Boston Public Library, Print Department; **rocket** Boston Public Library, Print Department; **milk drop** The MIT Museum; **Polaroid test** Polaroid Corporate Archives; **Aiken** Boston Public Library, Print Department; **Whirlwind** The MIT Museum

Corey & Company: Designers

Jeffrey Coolidge: Photography

Aerial photograph pages 12, 13 by Dann Blackwood, courtesy Woods Hole Oceanographic Institution

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